Tripp Lite
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# SmartOnline 200-240V 16kVA 14.4kW On-Line Double-Conversion UPS, N+1, Extended Run, SNMP, Webcard, 12U Rack/Tower, USB, DB9 Serial, C19 Outlets

MODEL NUMBER: **SU16KRTG**

### Highlights

- 16kVA / 16,000VA / 14,400W on-line double-conversion UPS, 0.9 power factor
- 200/208/220/230/240V 50/60Hz output, 96% Efficient Economy-mode option
- Hot-swap power & battery modules, N+1 fault tolerance at loads up to 8kVA
- USB, RS232, EPO ports, Support for SNMP/WEB & other card options
- Front panel LEDs with detailed LCD monitoring and control screen
- Expandable runtime with optional external battery packs
- Hardwire input (3 wire), C19 outlets

### Package Includes

- Two SU8000RT3UPM UPS power modules
- Two BP240V10RT3U battery packs
- SUPDMB20KIEC Parallel PDU with Bypass switch
- 4-post rackmount installation rails
- PowerAlert software and cabling

### Description

Tripp Lite SU16KRTG 16,000VA / 16kVA / 14,400 watt online, double-conversion UPS system offers complete power protection for critical server, network and telecommunications equipment in a 12U rack/tower configuration. This system delivers complete N+1 redundancy when used at loads up to 8kVA, and non-redundant operation at loads between 8 and 16kVA. Fault-tolerant auto-bypass prevents unexpected service interruptions during UPS overload or internal fault conditions. Included parallel PDU with manual bypass switching enables hot-swappable replacement of all major UPS system components in both N+1 and combined operating modes. Enhanced availability, fault tolerance and simple hot-swap replacement options make this UPS ideal for advanced networking applications in data centers, computer rooms, network closets and rugged industrial locations.

### Features

- Tripp Lite SU16KRTG 16kVA, 16,000VA / 14,400 watt on-line, double-conversion UPS system in 12U total rack/tower configuration
- Unique configuration offers 16kVA non-redundant operation and automatic N+1 redundancy at load levels of 8kVA and under
- Included Parallel PDU with manual bypass switch enables hot-swap replacement power modules at any supported load level
- Hardwire input; 8 C19 outlets
- Maintains full-time sine wave output within 2% of selectable 200/208/220/230/240V nominal
- Supports 50/60Hz operation for worldwide frequency compatibility
- Expandable runtime with optional external battery packs
- Some external battery configurations require the use of Tripp Lite's External Battery Configuration Software (see manual)
- Battery independent restart
- Highly efficient economy mode option
- Optional SNMPWEBCARD, RELAYIOCARD and RELAYIOMINI interface modules available (RELAYIOMINI requires removal of USB interface module)
- Applications utilizing the optional network communications card require two SNMPWEBCARD accessories (install one per included power module)

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- HID-compliant USB interface
- Includes Free PowerAlert monitoring software; PowerAlert LOCAL, PowerAlert NSA and PowerAlert NMS for monitoring up to 250 SNMP-enabled UPS, PDU and other networking devices
- Optional 2POSTRMKITHD supports installation in 2 post 19 inch racks (4 required)
- Optional 2-9USTAND supports upright tower placement (2 required)
- Supports Emergency Power Off (EPO) via built-in interface
- Front panel LEDs and LCD readout with scroll controls
- LED / LCD display panel rotates for viewing in rackmount or tower configurations
- External battery packs are field replaceable and hot swappable
- Frequency conversion mode enables conversion of 60Hz to 50Hz or 50Hz to 60Hz (no de-rating)

# Specifications

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| **General Info** | |
| RoHS | Y |
| **OUTPUT** | |
| Output Capacity Details | Supports up to 105% load continuously in double conversion mode, 106 to 125% for 1 minute, 126% to 150% for 30 seconds; Loads over 150% trigger immediate bypass mode operation to support loads directly from mains power; Double conversion mode is automatically restored as load levels are reduced to 95% or less |
| Output Volt Amp Capacity (VA) | 16000 |
| Output kVA Capacity (kVA) | 16 |
| Output Watt Capacity (Watts) | 14400 |
| Output kW Capacity (kW) | 14.4 |
| Power Factor | 0.9 |
| Crest Factor | 3:1 |
| Nominal Output Voltage(s) Supported | 200V; 208V; 220V; 230V; 240V |
| Nominal Voltage Details | Voltage selection via front panel LCD interface |
| Frequency Compatibility | 50 / 60 Hz; Supports 50 to 60 Hz and 60 to 50 Hz conversion |
| Frequency Compatibility Details | Output frequency matches input nominal on startup; Frequency conversion mode enables conversion of 60Hz to 50Hz or 50Hz to 60Hz (no de-rating) |
| Output Voltage Regulation (Line Mode) | +/- 2% |
| Output Voltage Regulation (Economy Line Mode) | +/- 10% |
| Output Voltage Regulation (Battery Mode) | +/- 2% |
| Output Receptacles | (8) C19 |
| Output Circuit Breakers | 8 20A breakers protect one C19 outlet each |
| Output AC Waveform (AC Mode) | Pure Sine wave |

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| Output AC Waveform (Battery Mode) | Pure Sine wave |
| **INPUT** | |
| Rated input current (Maximum Load) | 92A (200V), 88.4A (208V), 83.6A (220V), 80A (230V), 76.6A (240V) |
| Nominal Input Voltage(s) Supported | 200V AC; 208V AC; 220V AC; 230V AC; 240V AC |
| UPS Input Connection Type | Hardwire |
| UPS Input Connection Description | Hardwire input supports North American 208/240V input (L1, L2, G) and International 230/220/240V input (L, N, PE) |
| Recommended Electrical Service | 100A @ 200V-240V (L, N, PE), or 100A @ 200V, 208V, or 240V (L1, L2, G) |
| Voltage Compatibility (VAC) | 200; 208; 230; 240; 220 |
| Input Phase | Single-Phase |
| **BATTERY** | |
| Full Load Runtime (min.) | 5.5 minutes (14,400 watts) |
| Half Load Runtime (min.) | 13.5 minutes (7200 watts) |
| Expandable Battery Runtime | Runtime is expandable with external battery packs |
| External Battery Pack Compatibility | BP240V10RT3U ; BP240V557C-1PH ; BP240V787C-1PH ; BP240V1037C-1PH ; BP240V1407C-1PH |
| Expandable Runtime Description | For best results, add external batteries in multiples of two so that both included 8kVA power modules have an equal number and type of connected battery packs |
| DC System Voltage (VDC) | 240 |
| Battery Recharge Rate (Included Batteries) | Less than 6 hours from 10% to 90% (typical, full load discharge) |
| Battery Replacement Description | Hot-swappable, user replaceable external battery packs |
| **VOLTAGE REGULATION** | |
| Voltage Regulation Description | 2% output voltage regulation in standard online, double-conversion mode |
| Overvoltage Correction | Corrects overvoltages up to 300V |
| Undervoltage Correction | Corrects undervoltages as low as 100V |
| **USER INTERFACE, ALERTS & CONTROLS** | |
| Front Panel LCD Display | Selectable LCD display with scroll and selection buttons enables UPS control and detailed monitoring options; LED/LCD panel rotates for viewing in rack/tower formats; LCD Display supports ENGLISH, FRENCH, GERMAN, ITALIAN, SPANISH and PORTUGUESE (see manual) |
| Switches | 2 Switches control off/on power status and alarm-cancel/self-test operation; 2 additional switches support set and execute scrolling LCD functions; bundled PDU includes bypass switch to enable hot-swap UPS power module replacement |
| Alarm Cancel Operation | Alarm cancel switch |
| Audible Alarm | Unique audible alarms for all major UPS, environmental and power conditions (see manual) |
| LED Indicators | 6 LEDs indicate line power, online mode, economy/bypass mode, on-battery, charger and AC output status; LCD screen offers additional information and control options |

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| **SURGE / NOISE SUPPRESSION** | |
| UPS AC Suppression Response Time | Instantaneous |
| EMI / RFI AC Noise Suppression | Yes |
| **PHYSICAL** | |
| Included Mounting Accessory Description | 4 sets of adjustable 4 post rack rails included (one for each included 3U module) |
| Installation Form Factors Supported with Optional Accessories | 2 post rackmount (2POSTRMKITHD); Tower (2-9USTAND) |
| Optional Mounting Accessory Notes | Qty 4 2POSTRMKITHD required; Qty 2 2-9USTAND required |
| Primary Form Factor | Rackmount |
| UPS Power Module Dimensions (hwd, in.) | 5.14 x 17.5 x 25.82 |
| UPS Power Module Dimensions (hwd, cm) | 13.1 x 44.5 x 65.6 |
| Installed Whole System Maximum Rack Depth (in.) | 32.5 |
| Installed Whole System Maximum Rack Depth (cm) | 82.6 |
| Rack Height (U Spaces) | 12 |
| UPS Power Module Weight (lbs.) | 43 |
| UPS Power Module Weight (kg) | 19.5 |
| UPS Dimensions Details | Includes 2 SU8000RT3UPM UPS/Power modules and 2 BP240V10RT3U Battery packs; Listed weights and dimensions for UPS/Power module and Included battery pack each refer to a single unit |
| Included Battery Pack Dimensions (hwd / in.) | 5.25 x 17.5 x 25 |
| Included Battery Pack Dimensions (hwd / cm) | 13.3 x 44.5 x 63.5 |
| Included Battery Pack Weight (lbs.) | 158.7 |
| Included Battery Pack Weight (kg) | 72 |
| UPS Shipping Dimensions (hwd / in.) | 36 x 40.25 x 51 |
| UPS Shipping Dimensions (hwd / cm) | 91.4 x 102.2 x 129.5 |
| Shipping Weight (lbs.) | 600 |
| Shipping Weight (kg) | 272.4 |
| Cooling Method | Fans |
| UPS Housing Material | Steel |
| **ENVIRONMENTAL** | |

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| Operating Temperature Range | +32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius. |
| Storage Temperature Range | +5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius. |
| Relative Humidity | 0 to 95%, non-condensing |
| AC Mode BTU / Hr. (Full Load) | 5456 |
| AC Economy Mode BTU / Hr. (Full Load) | 2046 |
| AC Mode Efficiency Rating (100% Load) | 90% |
| AC Economy Mode Efficiency Rating (100% Load) | 96% |
| Operating Elevation (ft.) | 0-3000m (0 to 10,000 ft.) |
| Audible Noise | 60 dBA at front side 1 meter |
| Operating Elevation (m) | 0-3000 m |
| **COMMUNICATIONS** | |
| Communications Interface | USB (HID enabled); DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface |
| Network Monitoring Port Description | Applications utilizing the optional network communications card require two SNMPWEBCARD accessories (install one per included power module); Additional contact closure support with optional RELAYIOCARD and RELAYIOMINI interface cards; RELAYIOMINI installation requires removal of panel containing USB ports |
| PowerAlert Software | Included |
| Communications Cable | USB, DB9 serial and EPO cables included |
| WatchDog Compatibility | Supports Watchdog application, OS and hard-reboot restart options for remote applications |
| **LINE / BATTERY TRANSFER** | |
| Transfer Time | No transfer time (0 ms.) in online, double-conversion mode |
| Transfer Time (Economy Mode) | 8 milliseconds typical power failure response in optional economy mode |
| Low Voltage Transfer to Battery Power (Setpoint) | 100V |
| High Voltage Transfer to Battery Power (Setpoint) | 300V |
| **SPECIAL FEATURES** | |
| Cold Start (Startup in Battery Mode During a Power Failure) | Cold-start operation supported |
| Economy Mode Operation | Optional economy mode enables high efficiency bypass operation with a maximum output voltage variation of +/-10%. Double conversion mode is automatically restored as mains voltage varies beyond +/-10% with less than 1 millisecond transfer time between modes. |
| High Availability UPS Features | Automatic inverter bypass; Manual bypass switch; Detachable hot-swap PDU; Hot swappable UPS power module; Hot swappable batteries |
| Green Energy-Saving Features | High efficiency economy mode operation; Support for daily startup and shutoff; Schedulable daily hours of economy mode operation |

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| **CERTIFICATIONS** | |
| UPS Certifications | Tested to UL1778 (USA); Tested to CSA (Canada); CE; Meets FCC Part 15 Category A (EMI); ROHS (Restriction of Hazardous Substances) |
| UPS Certification Details | IEC 61000-4-5 1995 B Surge Immunity |
| **WARRANTY** | |
| Product Warranty Period (Worldwide) | 2-year limited warranty |

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